

13.56 MHz Radio Test Report

FCC ID:SIB-BGTAB-NV24A-1

This report concerns (check one) : Original Grant Class II Change

Project No. : 1411C077
Equipment : dreamtab
Model Name : BGTAB-NV24A
Applicant : Foxconn International Inc
Address : NO 2 ZIYOU ST TUCHENG DISTRICT NEW
TAIPEI,236 Taiwan

Date of Receipt : Nov. 10, 2014
Date of Test : Nov. 10, 2014~Nov. 25, 2014
Issued Date : Nov. 26, 2014
Tested by : BTL Inc.

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Table of Contents

1. CERTIFICATION	6
2. SUMMARY OF TEST RESULTS	7
2.1 TEST FACILITY	8
2.2 MEASUREMENT UNCERTAINTY	8
3. GENERAL INFORMATION	9
3.1 GENERAL DESCRIPTION OF EUT	9
3.2 DESCRIPTION OF TEST MODES	10
3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	11
4. EMC EMISSION TEST	12
4.1 CONDUCTED EMISSION MEASUREMENT	12
4.1.2 TEST PROCEDURE	12
4.1.3 DEVIATION FROM TEST STANDARD	12
4.1.4 TEST SETUP	13
4.1.5 EUT OPERATING CONDITIONS	13
4.1.5EUT TEST CONDITIONS	13
4.1.6 TEST RESULTS	13
4.2 RADIATED EMISSION TEST	14
4.2.1 LIMIT	14
4.2.2 TEST PROCEDURE	15
4.2.3 DEVIATION FROM TEST STANDARD	15
4.2.4 TEST SETUP	16
4.2.5 EUT OPERATING CONDITIONS	16
4.2.6 EUT TEST CONDITIONS	16
4.2.7 TEST RESULTS (BELOW 30MHZ) - FCC PART 15.209	17
4.2.8 TEST RESULTS - (30-1000MHZ) - FCC PART 15.209	17
4.2.9 TEST RESULTS- FCC PART 15.225	17
4.3 FREQUENCY STABILITY MEASUREMENT	18
4.3.1 LIMIT	18
4.3.2 TEST PROCEDURE	18
4.3.3 DEVIATION FROM TEST STANDARD	18
4.3.4 EUT OPERATING CONDITIONS	18
4.3.5 EUT TEST CONDITIONS	18
4.3.6 TEST RESULTS	18
5. 20DB SPECTRUM BANDWIDTH MEASUREMENT	19
5.1. LIMIT OF 20dB BANDWIDTH MEASUREMENT	19
5.2.TEST PROCEDURES	19
5.3. TEST SETUP LAYOUT	19
5.4. TEST DEVIATION	19
5.5. EUT OPERATION DURING TEST	19
5.6. TEST RESULT	19
6. MEASUREMENT INSTRUMENTS LIST	20

Table of Contents

7. EUT TEST PHOTO	21
ATTACHMENT A - CONDUCTED EMISSION	24
ATTACHMENT B - RADIATED EMISSION (9KHZ-30MHZ)	27
ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)	29
ATTACHMENT D - RADIATED EMISSION (FCC PART 15.225)	32
ATTACHMENT E - FREQUENCY STABILITY MEASUREMENT	34
ATTACHMENT F - 20DB SPECTRUM BANDWIDTH MEASUREMENT	36

REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-6-1411C077	Original Issue.	Nov. 26, 2014

1. CERTIFICATION

Equipment : dreamtab
Brand Name : Nabi
Model Name : BGTAB-NV24A
Applicant : Foxconn International Inc
Manufacturer : FUHU INC.
Address : 909N., Sepulveda Blvd., Suite 540, E1 Segundo, CA 90245
Factory : HONGFUJIN Precision Electronics (Chong Qing) Co., Ltd.
Address : No.1, 1st E District RD., Shapingba District, Chongqing 401332, P.R. China
Date of Test : Nov. 10, 2014~Nov. 25, 2014
Test Sample : ENGINEERING SAMPLE
Standard(s) : FCC Part 15, Subpart C: 15.225 / ANSI C63.4: 2009

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-6-1411C077) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part 15, Subpart C: 15.225			
Standard(s) Section	Test Item	Judgment	Remark
15.207	Conducted emission	PASS	
15.35/ 15.205 / 15.209 / 15.225	Radiated emission	PASS	
15.225(e)	Frequency Stability	PASS	
15.203	Antenna Requirement	PASS	
	20dB Occupied Bandwidth Measurement	PASS	

NOTE:

(1) "N/A" denotes test is not applicable in this test report.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-C02/DG-CB03** at the location of No.3, Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan Guangdong, China.523792
BTL's test firm number for FCC: 319330

2.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty is not specified by FCC rules and for reference only.

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95%**.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U,(dB)	NOTE
DG-C02	CISPR	150 KHz~30MHz	3.4	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)	Note
DG-CB03	CISPR	9KHz~30MHz	V	3.79	
		9KHz~30MHz	H	3.57	
		30MHz~200MHz	V	3.82	
		30MHz~200MHz	H	3.60	
		200MHz~ 1,000MHz	V	3.86	
		200MHz~ 1,000MHz	H	3.94	
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	H	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	H	4.14	

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	dreamtab	
Brand Name	Nabi	
Model Name	BGTAB-NV24A	
Model Difference	N/A	
Product Description	Operation Frequency:	13.56 MHz
	Antenna Designation:	Loop Antenna
	More details of EUT technical specification, please refer to the User's Manual.	
PowerSource	#1 DC supplied from AC Adapter. Model: ADS-65LSI-19-3 19065G #2 Supplied from rechargeable Li-ion polymer battery. 1) Brand / Model: McNair / MLP2462113-2S 2) Manufacturer: HongKong Highpower Technology Co., Ltd Model: IN484	
Power Rating	#1 I/P AC 100-240V~ 50/60Hz 1.5A O/P: DC 19V 3.42A #2 7.4V 1650mAh 12.21Wh	
Connecting I/O Port(s)	Please refer to the User's Manual	

Note:

1. Table for Filed Antenna

Ant.	Manufacturer	Model Name	Antenna Type
1	JIENG TAI	AH-JT-0219Y211	Loop Antenna

3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Test Mode	Description
Mode 1	TX MODE

Conducted emission test	
Final Test Mode	Description
Mode 1	TX MODE

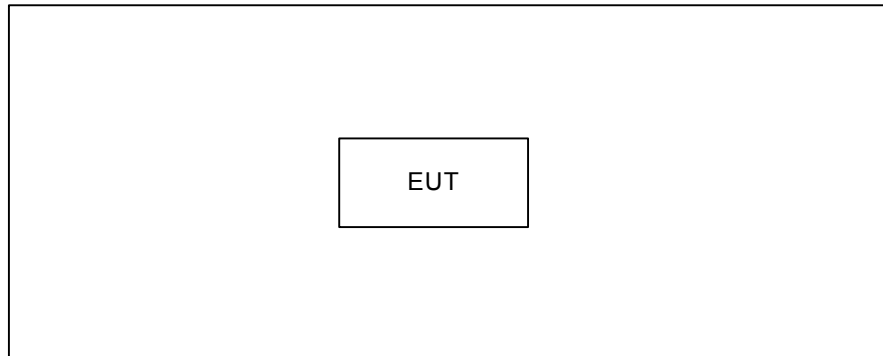
Radiated emission test	
Final Test Mode	Description
Mode 1	TX MODE

Frequency Stability test/ Antenna Requirement test/ 20dB Occupied Bandwidth Measurement	
Final Test Mode	Description
Mode 1	TX MODE

Note:

- (1) The EUT is considered a portable unit; it was pre-tested on the positioned of each 3 axis. The worst case was found positioned on z-plane. Therefore only the test data of this z-plane was used for radiated emission measurement test.

3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID/IC	Series No.	Note
-	-	-	-	-	-	

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

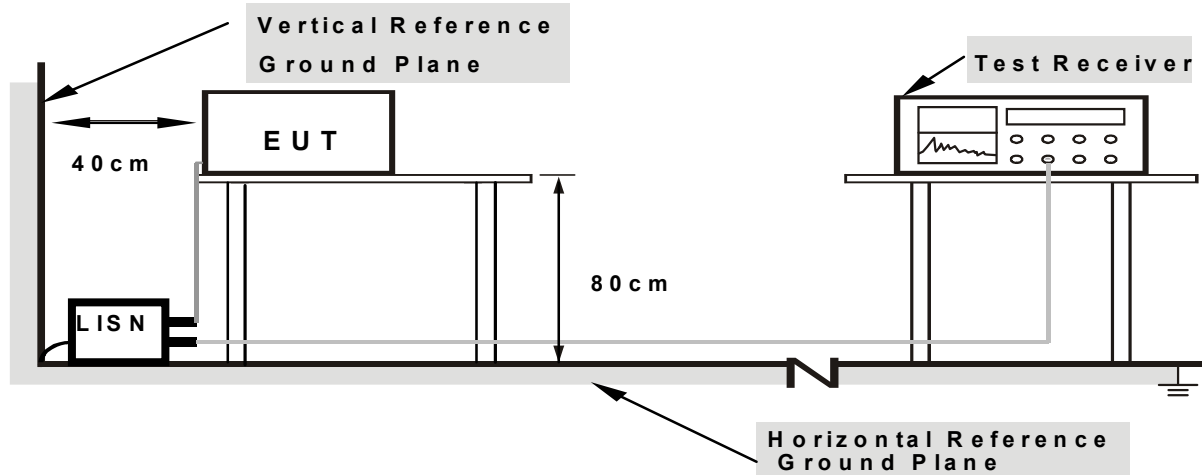
4.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the groundplane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TESTSETUP



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

The EUT was programmed to be in continuously transmitting mode.

4.1.5 EUT TEST CONDITIONS

Temperature: 25°C

Relative Humidity: 55%

Test Voltage: AC120V/60Hz

4.1.6 TEST RESULTS

Please refer to the Attachment A.

Remark

- (1) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform in this case, a "*" marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.

4.2 RADIATED EMISSION TEST

4.2.1 LIMIT

FCC Part 15.209				
Frequency (MHz)	Field Strength Limitation		Field Strength Limitation at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
0.009 – 0.490	2400 / F(KHz)	300m	10000* 2400/F(KHz)	20log 2400/F(KHz) + 80
0.490 – 1.705	24000 / F(KHz)	30m	100 * 24000/F(KHz)	20log 24000/F(KHz) + 40
1.705 –30.00	30	30m	100* 30	20log 30 + 40
30.0 – 88.0	100	3m	100	20log 100
88.0 – 216.0	150	3m	150	20log 150
216.0 – 960.0	200	3m	200	20log 200
Above 960.0	500	3m	500	20log 500
FCC Part 15.225(a)/(b)/(c)				
Frequency (MHz)	Field Strength Limitation		Field Strength Limitation at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
13.553 – 13.567	15,848	30 m	15,848*100	124
13.567 – 13.710	334	30 m	334*100	90.5
13.110 – 13.410	106	30 m	106*100	80.5
13.710 – 14.010				

Note

:

- (1) The tighter limit shall apply at the boundary between two frequency range.
- (2) Limitation expressed in dBuV/m is calculated by 20log Emission Level (uV/m).
- (3) If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of $L_{d1} = L_{d2} * (d_2/d_1)^2$.

Example:

F.S Limit at 30m distance is 30uV/m , then F.S Limitation at 3m distance is adjusted as $L_{d1} = L_1 = 30uV/m * (10)^2 = 100 * 30 uV/m$

- (4) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)

Margin Level = Measurement Value – Limit Value

4.2.2 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

NOTE: (FCC PART 15.209)

- a. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz.
- b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.

NOTE: (FCC PART 15.225)

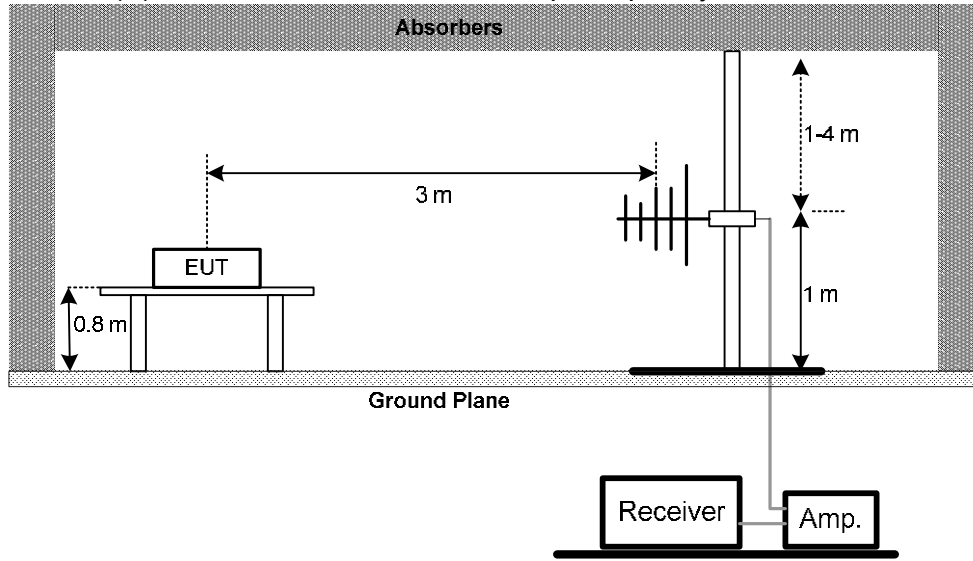
- a. Spectrum Setting:
 - 9 KHz – 150 KHz, RBW= 200Hz, VBW=200Hz, Sweep time = 200 ms.
 - 150 K Hz – 30 MHz, RBW= 10 KHz, VBW=10 KHz, Sweep time = 200 ms.
 - 30 MHz – 1000 MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
- b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- c. The Log-Bicon Antenna will use to test frequency range from 30MHz to 1000MHz and the Loop Antenna will use to test frequency below 30MHz.

4.2.3 DEVIATION FROM TEST STANDARD

No deviation

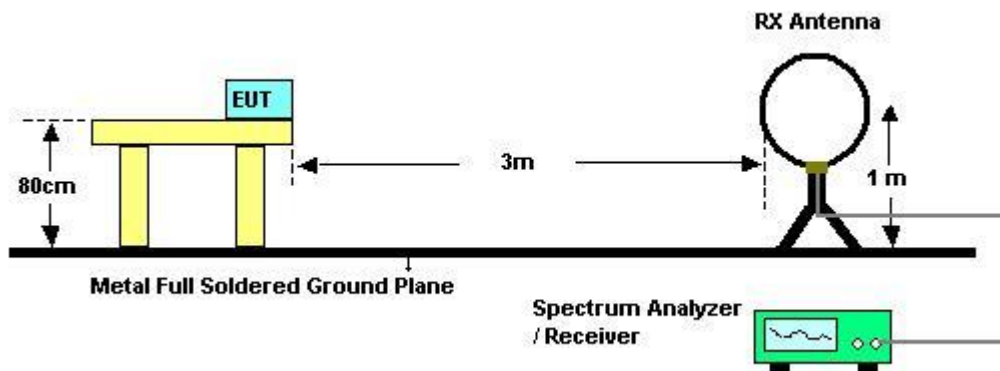
4.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1



GHz

(B) For radiated emissions below



30MHz

4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.6 EUT TEST CONDITIONS

Temperature: 25°C
 Relative Humidity: 55%
 Test Voltage: DC7.4V

4.2.7 TEST RESULTS (BELOW 30MHZ) - FCC PART 15.209

Please refer to the Attachment B.

4.2.8 TEST RESULTS-(30-1000MHZ) - FCC PART 15.209

Please refer to the Attachment C.

4.2.9 TEST RESULTS- FCC PART 15.225

Please refer to the Attachment D.

4.3 FREQUENCY STABILITY MEASUREMENT

4.3.1 LIMIT

FCC Part 15.225(e)

The frequency tolerance of the carrier signal shall be maintained within +/-0.01% of the operating frequency over a temperature variation of - 20 degrees to + 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.
For battery operated equipment, the equipment tests shall be performed using a new battery.

4.3.2 TEST PROCEDURE

- a. The equipment under test was connected to an external AC power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber.
After the temperature stabilized for approximately 20 minutes, the frequency of the output signal was recorded from the counter.
- b. At room temperature ($25\pm 5^{\circ}\text{C}$), an external variable AC power supply was connected to the EUT. The frequency of the transmitter was measured for 115%, 100% and 85% of the nominal operating input voltage.

4.3.3 DEVIATION FROM TEST STANDARD

No deviation

4.3.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

4.3.5 EUT TEST CONDITIONS

Temperature: 25°C
Relative Humidity: 55%
Test Voltage: DC7.4V

4.3.6 TEST RESULTS

Please refer to the Attachment E.

5. 20dB SPECTRUM BANDWIDTH MEASUREMENT

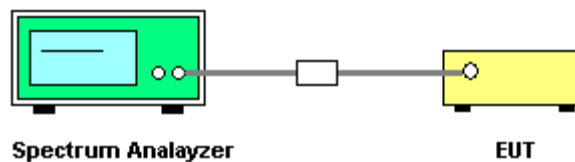
5.1. LIMIT OF 20dB BANDWIDTH MEASUREMENT

The 20dB bandwidth shall be specified in operating frequency band.

5.2. TEST PROCEDURES

The bandwidth of the fundamental frequency was measured by spectrum analyzer with 10kHz RBW and 10kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

5.3. TEST SETUP LAYOUT



5.4. TEST DEVIATION

There is no deviation with the original standard.

5.5. EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

5.6. TEST RESULT

Please refer to the Attachment F.

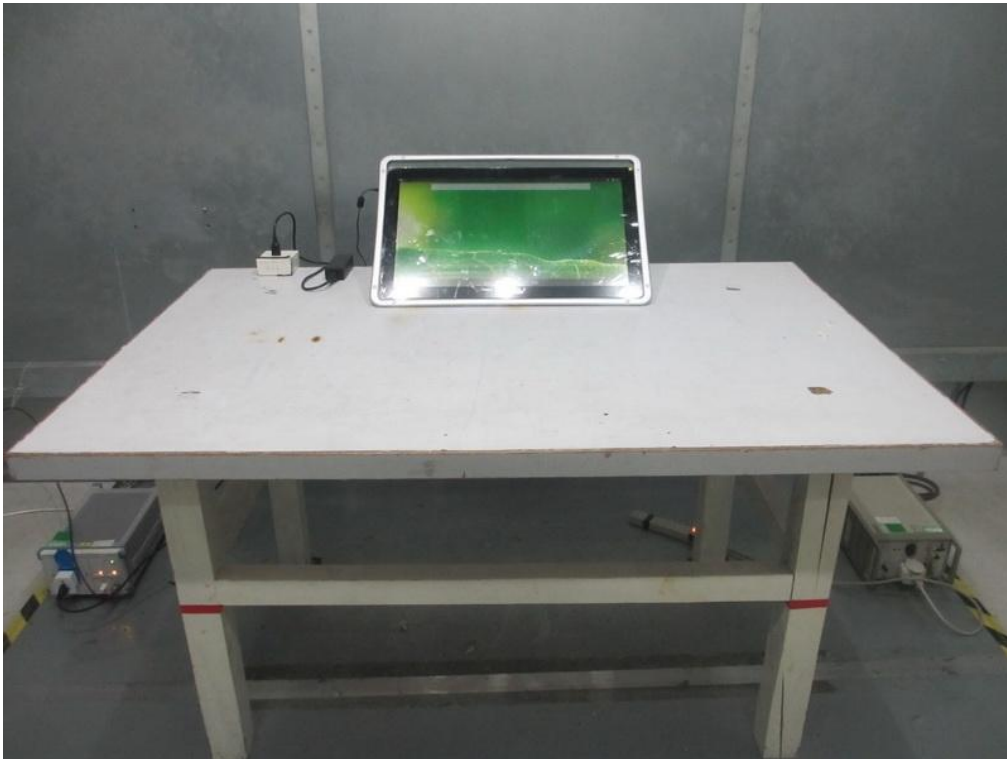
6. MEASUREMENT INSTRUMENTS LIST

Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00052765	Apr. 24, 2015
2	LISN	R&S	ENV216	100087	Mar. 14, 2015
3	Test Cable	N/A	C_17	N/A	Mar. 14, 2015
4	EMI TEST RECEIVER	R&S	ESCS30	826547/022	Apr. 24, 2015
5	50Ω Terminator	SHX	TF2-3G-A	08122902	Apr. 24, 2015

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Apr. 24, 2015
2	Amplifier	HP	8447D	2944A09673	Apr. 24, 2015
3	Test Receiver	R&S	ESCI	100382	Apr. 24, 2015
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 01, 2015
5	Antenna	ETS	3115	00075789	Apr. 24, 2015
6	Amplifier	Agilent	8449B	3008A02274	Apr. 24, 2015
7	Spectrum	Agilent	E4408B	US39240143	Mar. 14, 2015
8	Test Cable	HUBER+SUHNER	C-45	N/A	Apr. 29, 2015
9	Controller	CT	SC100	N/A	N/A
10	Horn Antenna	EMCO	3115	9605-4803	Apr. 24, 2015
11	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Apr. 24, 2015
12	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Feb. 22, 2015

6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 02, 2015

Remark: "N/A" denotes no model name, serial no. or calibration specified.
 All calibration period of equipment list is one year.

7. EUT TEST PHOTO**Conducted Measurement Photos**

Radiated Measurement Photos

9KHz to 30MHz



Radiated Measurement Photos

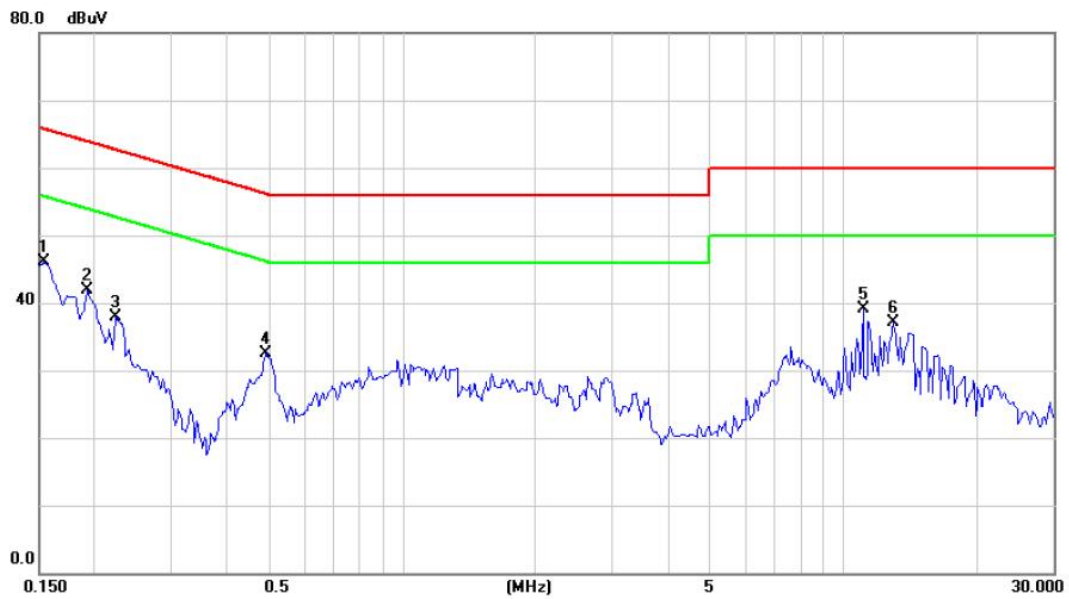
30MHz to 1000MHz



ATTACHMENT A - CONDUCTED EMISSION

Test Mode : TX MODE

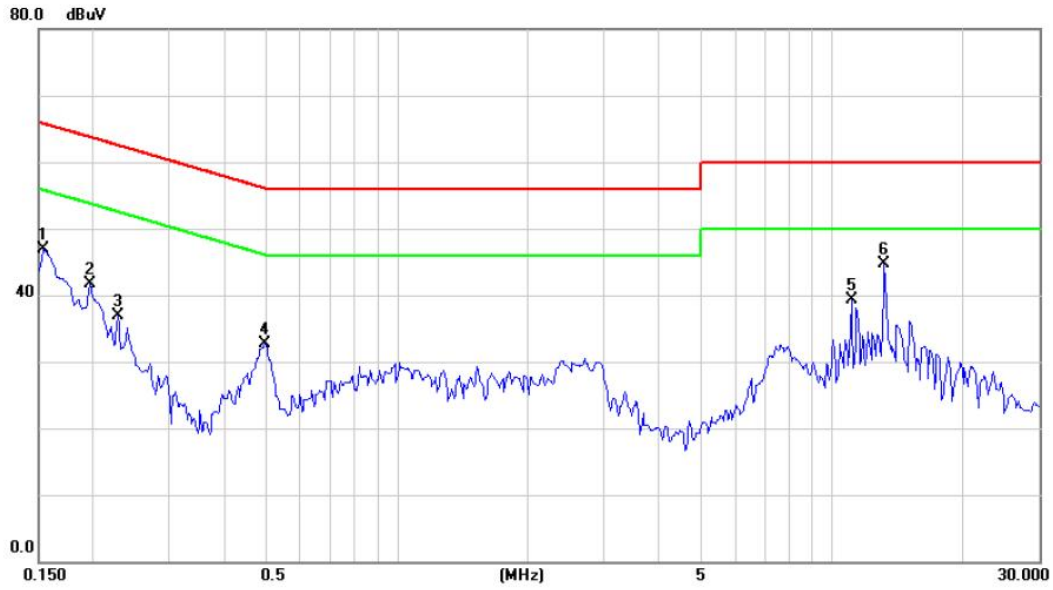
Line



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1540	36.49	9.52	46.01	65.78	-19.77	peak	
2		0.1930	32.31	9.54	41.85	63.91	-22.06	peak	
3		0.2242	28.33	9.54	37.87	62.66	-24.79	peak	
4		0.4898	22.97	9.59	32.56	56.17	-23.61	peak	
5		11.0897	28.87	10.15	39.02	60.00	-20.98	peak	
6		12.9961	26.90	10.25	37.15	60.00	-22.85	peak	

Test Mode : TX MODE

Neutral



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1540	37.38	9.52	46.90	65.78	-18.88	peak	
2	0.1970	32.13	9.53	41.66	63.74	-22.08	peak	
3	0.2281	27.45	9.53	36.98	62.52	-25.54	peak	
4	0.4977	23.11	9.58	32.69	56.04	-23.35	peak	
5	11.0897	29.01	10.22	39.23	60.00	-20.77	peak	
6 *	13.2110	34.39	10.36	44.75	60.00	-15.25	peak	

ATTACHMENT B - RADIATED EMISSION (9KHZ-30MHZ)

Test Mode : TX Mode

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0156	0°	13.38	24.58	37.99	103.74	-65.75	AVG
0.0156	0°	14.24	24.58	38.84	123.74	-84.90	PEAK
0.0311	0°	6.76	23.60	30.40	97.75	-67.35	AVG
0.0311	0°	7.59	23.60	31.60	117.75	-86.15	PEAK
0.0385	0°	4.34	23.13	27.43	95.90	-68.47	AVG
0.0385	0°	5.76	23.13	28.83	115.90	-87.07	PEAK
0.0470	0°	3.15	22.59	25.71	94.16	-68.45	AVG
0.0470	0°	4.82	22.59	27.37	114.16	-86.79	PEAK
2.0604	0°	28.72	19.46	48.17	69.54	-21.37	QP
3.3738	0°	20.35	18.94	39.31	69.54	-30.23	QP

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0155	90°	13.16	24.30	37.48	123.80	-86.32	AVG
0.0155	90°	14.21	24.30	38.47	143.80	-105.33	PEAK
0.0311	90°	6.86	23.60	30.47	117.75	-87.28	AVG
0.0311	90°	7.73	23.60	31.39	137.75	-106.36	PEAK
0.0373	90°	5.91	23.20	29.13	116.17	-87.04	AVG
0.0373	90°	6.87	23.20	30.04	136.17	-106.13	PEAK
0.0470	90°	5.19	22.59	27.73	114.16	-86.43	AVG
0.0470	90°	6.11	22.59	28.68	134.16	-105.48	PEAK
2.0604	90°	29.65	19.46	49.09	69.54	-20.45	QP
3.2842	90°	17.14	18.93	36.05	69.54	-33.49	QP

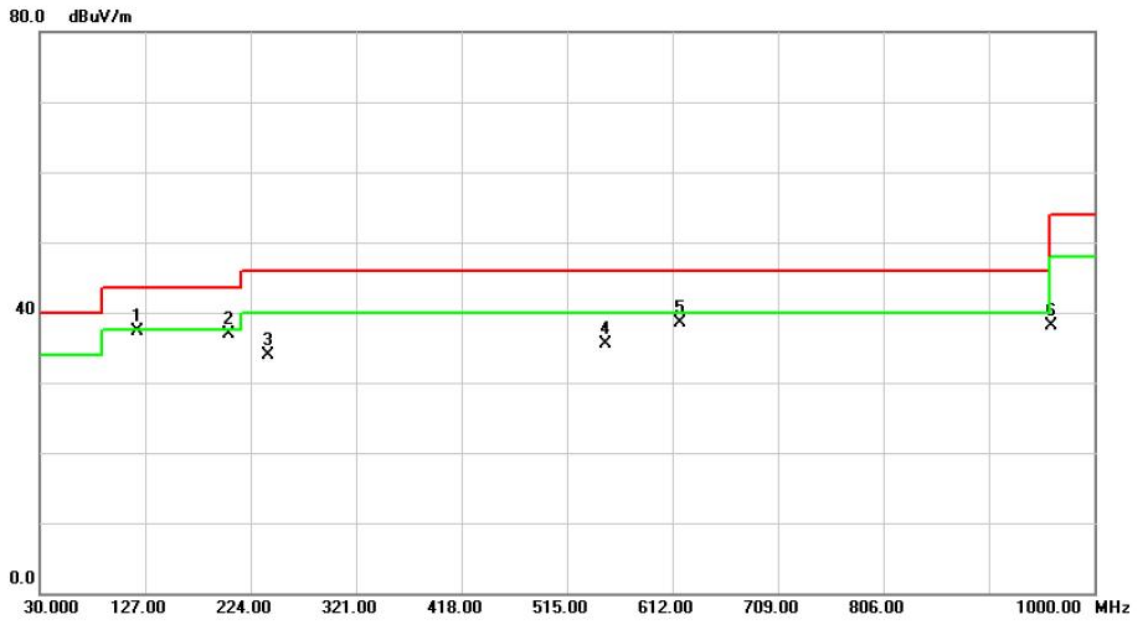
Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported ◦
- (2) Distance extrapolation factor = $40 \log(\text{specific distance} / \text{test distance})$ (dB); ◦
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor. ◦

ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)

Test Mode: TX MODE

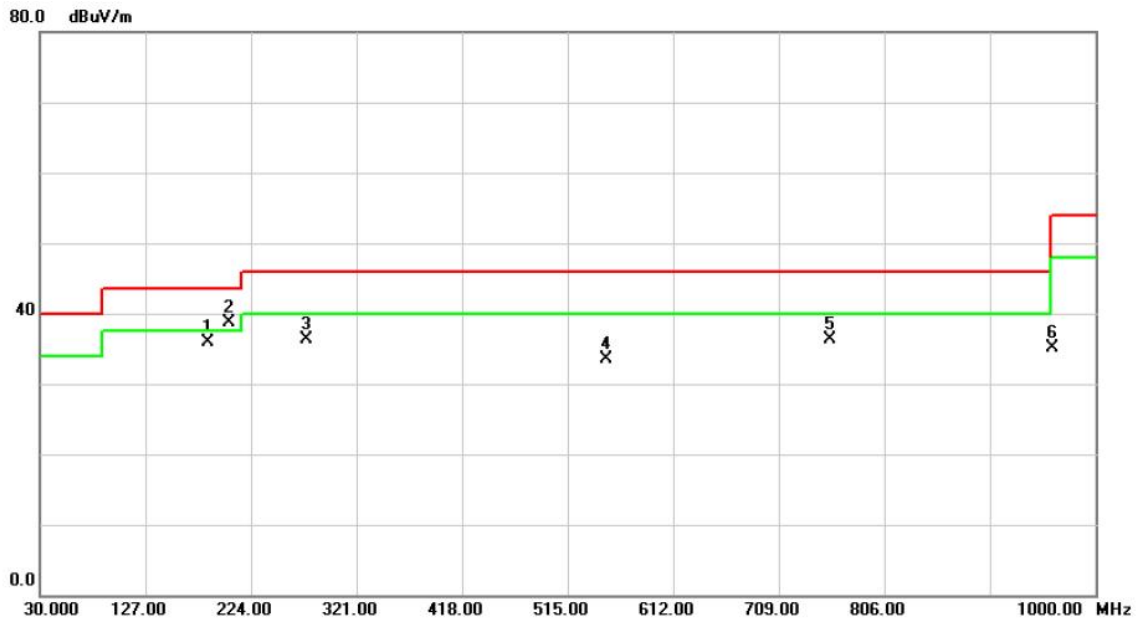
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	120.2100	51.44	-14.19	37.25	43.50	-6.25	peak	
2		203.6300	52.00	-15.14	36.86	43.50	-6.64	peak	
3		240.4900	47.94	-14.04	33.90	46.00	-12.10	peak	
4		549.9200	43.44	-7.93	35.51	46.00	-10.49	peak	
5		618.7900	45.48	-6.88	38.60	46.00	-7.40	peak	
6		960.2300	38.45	-0.25	38.20	54.00	-15.80	peak	

Test Mode: TX MODE

Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		184.2300	49.43	-13.57	35.86	43.50	-7.64	peak	
2	*	203.6300	53.83	-15.14	38.69	43.50	-4.81	peak	
3		275.4100	48.97	-12.72	36.25	46.00	-9.75	peak	
4		549.9200	41.34	-7.93	33.41	46.00	-12.59	peak	
5		756.5300	40.74	-4.40	36.34	46.00	-9.66	peak	
6		960.2300	35.31	-0.25	35.06	54.00	-18.94	peak	

ATTACHMENT D - RADIATED EMISSION (FCC PART 15.225)

Test Mode	TX MODE
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Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
13.560	0°	30.24	21.27	51.51	124.00	-72.49	
27.120	0°	15.36	21.77	37.13	69.54	-32.41	

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
13.560	90°	29.67	21.27	50.94	124.00	-73.06	
27.120	90°	13.41	21.77	35.18	69.54	-34.36	

ATTACHMENT E - FREQUENCY STABILITY MEASUREMENT

Test Mode:	TX MODE
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Frequency Stability Versus Environmental Temperature

	Temperature (°C)	Voltage (DC)	Frequency (MHz)	Frequency Error (kHz)	Limit (kHz)	Result
	20	120V	13.5599			
0 min	50	120V	13.5597	0.0003	+/- 1.356	PASS
	-20	120V	13.5601	0.0001	+/- 1.356	PASS
2 min	50	120V	13.5602	0.0002	+/- 1.356	PASS
	-20	120V	13.5598	0.0002	+/- 1.356	PASS
5 min	50	120V	13.5599	0.0001	+/- 1.356	PASS
	-20	120V	13.5601	0.0001	+/- 1.356	PASS
10 min	50	120V	13.5598	0.0002	+/- 1.356	PASS
	-20	120V	13.5599	0.0001	+/- 1.356	PASS

Frequency Stability Versus Input Voltage

Temperature (°C)	Voltage (AC)		Frequency (MHz)	Frequency Error (kHz)	Limit (kHz)	Result
20	V-nom	120V	13.5598	0.0002		
20	V-min	102V	13.5601	0.0001	+/- 1.356	PASS
20	V-max	138V	13.5599	0.0001	+/- 1.356	PASS

**ATTACHMENT F - 20dB SPECTRUM BANDWIDTH
MEASUREMENT**

Test Mode : TX Mode

